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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/714,328	11/14/2003	Bryan Prucher	PBP-1111-A	2750
7590	01/10/2006			
Arnold S. Weintraub The Weintraub Group Suite 240 32000 Northwestern Highway Farmington Hills, MI 48334			EXAMINER ELVE, MARIA ALEXANDRA	
			ART UNIT	PAPER NUMBER
			1725	
DATE MAILED: 01/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/714,328

Applicant(s)

PRUCHER, BRYAN

Examiner

M. Alexandra Elve

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-11, 13 and 16-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-11, 13, 16-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Instant claim states, "chrome"; is the applicant referring to chromium? Clarification is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 & 5-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimamura et al. (USPN 5,004,498).

Shimamura et al. discloses an electrode, which is made of dispersion strengthened copper alloy. The copper alloy is placed in a reducing or inert atmosphere and sintered. Sintering and reducing temperatures are not higher than 1065 C (approx. 1940 F). Hydrogen may be used in the furnace environment. The sinter may be placed in a mold prior to sintering or the sinter powder may be hot pressed during sintering. Alloying elements such as tungsten, cadmium, chromium or zirconium are added to the sinter. Secondary processing such as thermal treatments or plastic deformation may

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follow the sintering operation. (abstract, figures, col. 1, lines 15-20, col. 2, lines 42-58, col. 3, lines 10-15, col. 5, lines 40-45, col. 6, lines 3-38, col. 7, lines 58-68, col. 8, lines 5-30, col. 17, lines 14-45, col. 18, lines 35-40)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 8-11, 13 & 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura et al. as stated above and further in view of Nadkarni et al. (USPN 4,315,777).

Shimamura et al. does not teach the pressure and density of the sinter.

Nadkarni et al. discloses the sintering of a copper alloy. Pressures of 32,000 to 75,000 psi are used yielding theoretical densities of about 80-90%. (abstract, figures, col. 1, 3, 8-10)

It would have been obvious to one of ordinary skill in the art at the time of the invention to determine the density and pressure, as taught by Nadkarni et al. in the Shimamura et al. system because these are merely processing parameters.

Claims 16 & 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura et al. and Nadkarni et al. as stated above and further in view of Kato et al. (USPN 5,685,357).

Shimamura et al. and Nadkarni et al. do not teach thixo-molding (semi-solid forming).

Kato et al. discloses forming metallic particle feed material in an injection molding machine. Parts are formed by thixo-molding. This is used to form a variety of metallic parts.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use thixo-molding, as taught by Kato et al. in the Shimamura et al. and Nadkarni et al. system because this is merely a type of forming.

Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura et al. and Nadkarni et al. as stated above and further in view of Prucher (USPN 5,041,711).

Shimamura et al. and Nadkarni et al. do not teach the use of silver in the sinter.

Prucher discloses a spot welding electrode, which uses silver in the sinter.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use silver, as taught by Prucher in the Shimamura et al. and Nadkarni et al. system because of the enhanced electrical properties of the electrode.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shimamura et al., Nadkarni et al., Kato et al. and Prucher as stated above and further in view of the following.

Shimamura et al. and Nadkarni et al. do not teach thixo-molding (semi-solid forming) or the use of silver in the sinter.

Kato et al. discloses forming metallic particle feed material in an injection molding machine. Parts are formed by thixo-molding. This is used for form a variety of metallic parts. Prucher disclose a spot welding electrode, which uses silver in the sinter.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use thixo-molding, as taught by Kato et al. and the use of silver as taught by Prucher in the Shimamura et al. and Nadkarni et al. system because of the enhanced product; both mechanically and electrically.

Response to Amendment

Applicant's arguments filed 10/17/05 have been fully considered but they are not persuasive.

Applicant argues that Shimamura et al. does not teach cold forming. The examiner respectfully disagrees because plastic deformation encompasses cold forming, that is, cold forming is a subset of plastic deformation. In addition the applicant argues that the reference teaches machining while instant claims do not. The examiner

respectfully notes that applicant uses open language "comprising" which does not preclude machining. Furthermore, applicant is referring to a specific embodiment. The reference must be taken in its entirety and hence the prior art does teach and suggest instant claims.

Applicant argues that Nadkarni et al. does not teach cold forming. It is respectfully noted that cold forming was taught by the primary reference, Shimamura et al. Nadkarni et al., a secondary reference, was relied upon to teach pressure and densities of sinters.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the references are all directed to dispersion strengthening metal alloys and the use of particulate or powder metals or alloys.

In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir.

1986). Prucher was a secondary reference which the common use of silver in an electrode.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Alexandra Elve whose telephone number is 571-272-1173. The examiner can normally be reached on 6:30-3:00 Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 8, 2006.



M. Alexandra Elve
Primary Examiner 1725